

GIS In the City of Chesapeake Debris Management Planning

**Eric J. Martin, P.E.
City Engineer**

**Virginia Emergency Management
Conference
March 11, 2008**



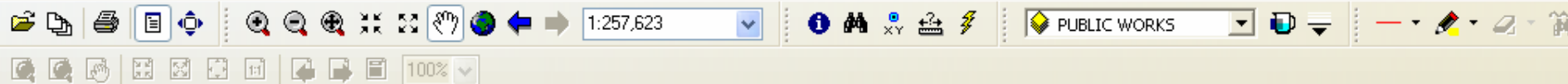
YOU ARE HERE!

Overview

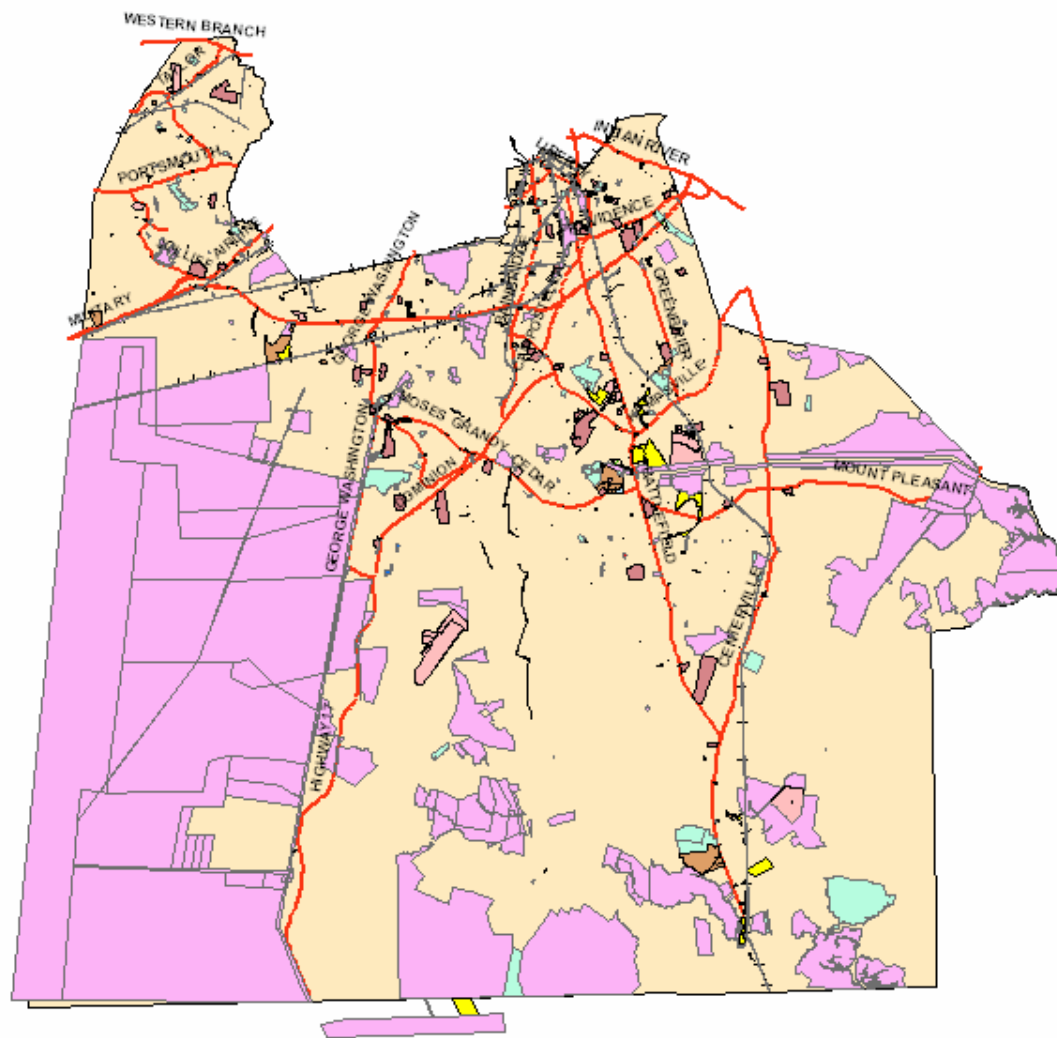
- **Pre-Planning**
 - Debris Site Selection
 - Debris Site Plans
 - Debris Routes
 - Debris Clearance Zones
- **During Event**
 - Tracking trees / power lines down
 - Tracking roads cleared – initial sweep
- **Post Event**
 - Debris Zones cleared (FEMA / citizen reporting)

Pre-Planning

- **Debris Site Selection**
 - Ideal site vs. available land considerations
 - Public vs. private ownership
 - Size – 100 AC per 1 M CY (60% buffers, roads, etc.)
 - Environmental constraints – wetlands, stream buffers
 - Minimization of haul distances
 - Safe use of tub grinders and air curtain burners
 - What not to pick
 - schools /parks
 - potential tent cities



- ☒ Parcel Plats
- ☐ Historical Parcels
- ☒ Public Properties
 - CODE
 - City Maintained Owned by others
 - Parks _Rec Maintained owned by other
 - Residue or Undeveloped
 - Developed
 - Parks and Recreation
 - Schools
 - Public Authority
 - Fire Stations
 - Police Precincts
 - Libraries
 - Other Cities, etc.
- ☒ Major Streets
 - VDOT_RANK
 - EXPRESSWAY
 - PRIMARY
- ☒ Streets
- ☒ railroads
- ☒ BOUNDARIES
- ☐ TOPOGRAPHY
- ☒ ENVIRONMENT
 - ☒ Lakes and Streams
 - ☒ wetlands
 - ☒ Ches Bay pres area
 - ☒ Aerial Photo 02 VBMP



IntraMap context = MunicipalWorks



Van Images 2003
Selection cleared.

Layer Manager

Show Table of Contents

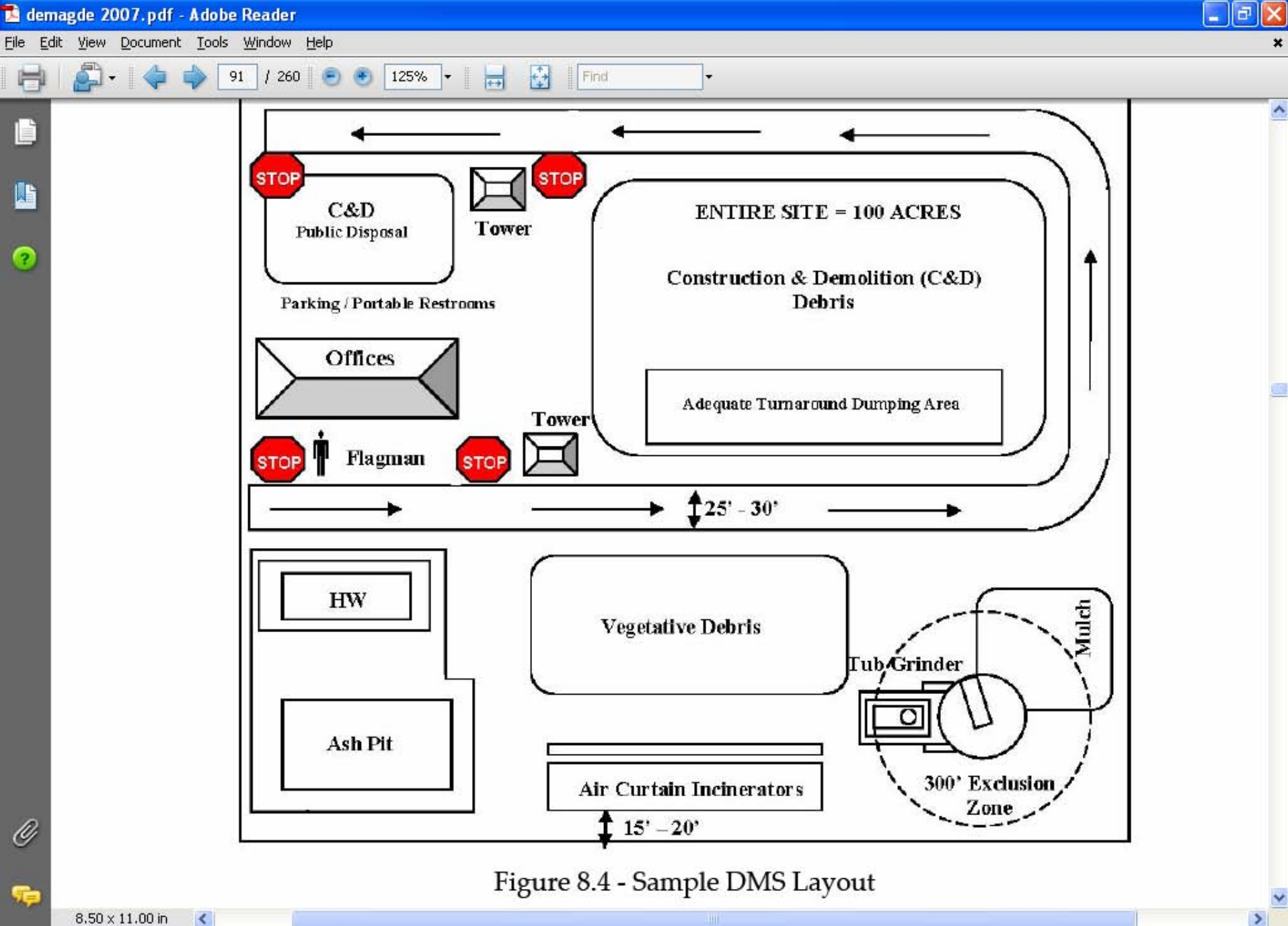
Show Legend

- ☐ ☐ Railroad Crossings
- ☒ ☐ Railroads - Primary
- ☐ ☐ Soils (2004)
- ☐ ☐ Street Lights
- ☒ ☐ Streets
- ☐ ☐ Survey Control Points
- ☐ ☐ Traffic Signals
- ☒ ☒ Van Images 2003
- ☒ ☐ Veg_hydr
- ☐ ☐ Watersheds
- ☒ ☐ background

Apply Changes to Map

Van Image Browser



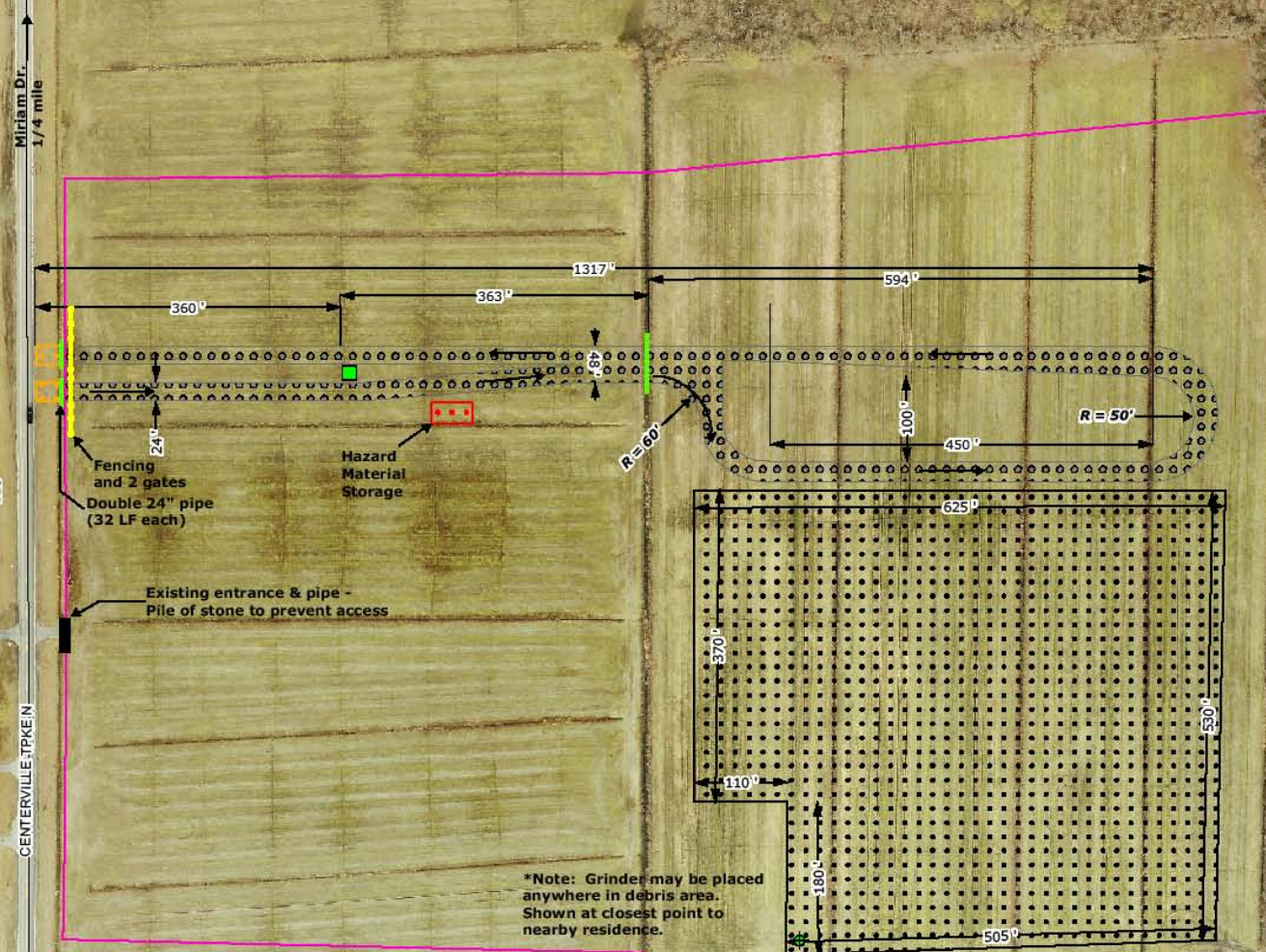




0 50 100 200 300 Feet

Legend

- tower
- ◆ grinder
- Construction Entrance
- Containment Area
- Aggregate w/ fabric
- Mulch Road/Pad
- Debris Sites 2007 Area
- Street centerlines



*Note: Grinder may be placed anywhere in debris area. Shown at closest point to nearby residence.

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Centerville Turnpike Site
Created by: Cameron McCormick
Date: June 18, 2007
Project: cmm07051.mxd

Debris Site Locations



Drawn by: Cameron McCormick Date: October 15, 2006
Project: cmm07051_debris_sites.mxd

0 2 4 8 Miles

Site Activation




-  Level 1
-  Level 2
-  Level 3

Debris Site Geographic Locations

	Latitude:	Longitude:
Centerville	36.75249443 N	76.18462118 W
Land of Promise	36.67738207 N	76.18372155 W
St. Brides	36.5988725 N	76.21842208 W
Comland	36.64689104 N	76.3632099 W
Shillelagh	36.69490128 N	76.30624859 W
Dominion	36.70282192 N	76.34959297 W
Elizabeth River	36.78283586 N	76.30178304 W
Holland	36.81769887 N	76.48872368 W

**Latitudes and
longitudes
required for
FEMA reporting**

Legend

-  Water features
-  City Boundary
-  Major Streets

HOLLAND LANDFILL SITE

Western Branch

Camelot

ELIZABETH RIVER TERMINAL SITE

South Norfolk

Indian River

Rivercrest

Greenbrier

CENTERVILLE SITE

DOMINION BLVD RESIDENTIAL SITE

SHILLELAGH SITE

Great Bridge

LAND OF PROMISE SITE

Deep Creek

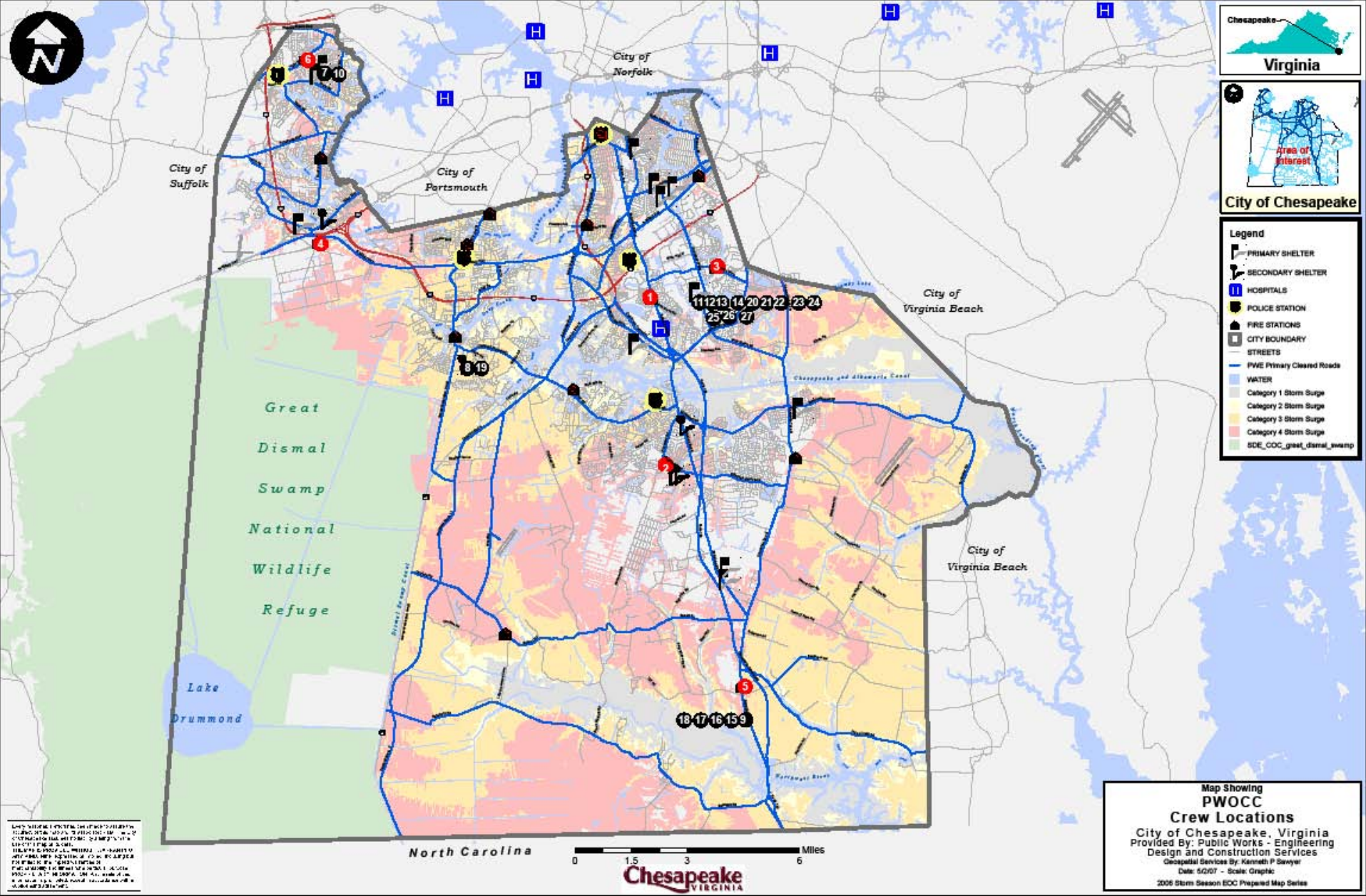
CORNLAND ROAD SITE

SAINT BRIDES PARK SITE

S. Chesapeake

During Event

- Tracking trees / power lines down
- Tracking roads cleared – initial sweep





Hurricane Isabel Trees Down and Power Lines Down

September 18, 19, & 20

of
folk

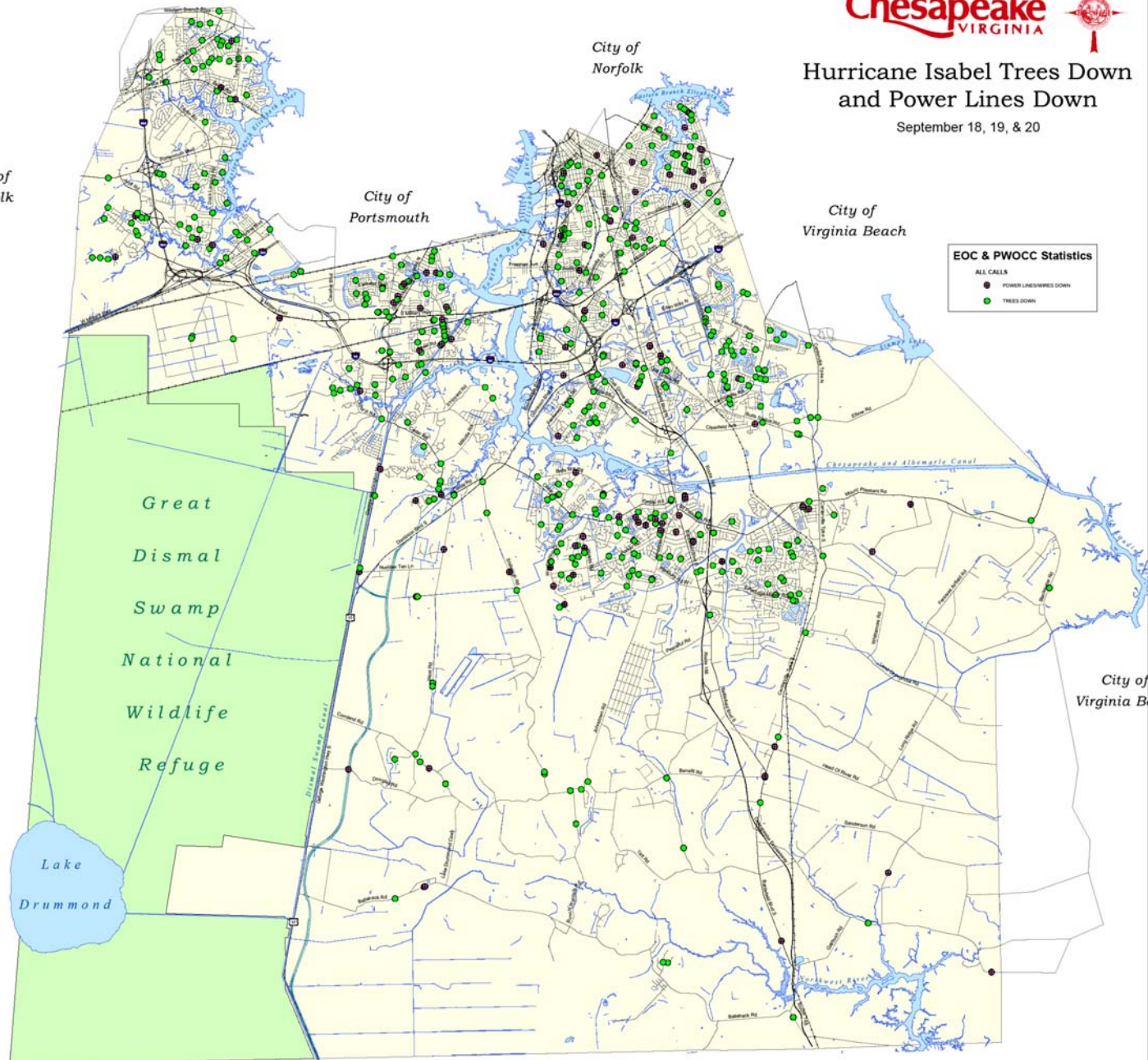
City of
Portsmouth

City of
Norfolk

City of
Virginia Beach

EOC & PWOC Statistics

- ALL CALLS
- POWER LINES DOWN
- TREES DOWN



Great
Dismal
Swamp
National
Wildlife
Refuge

Lake
Drummond

City of
Virginia B

Reported Flooding During Hurricanes Floyd and Irene

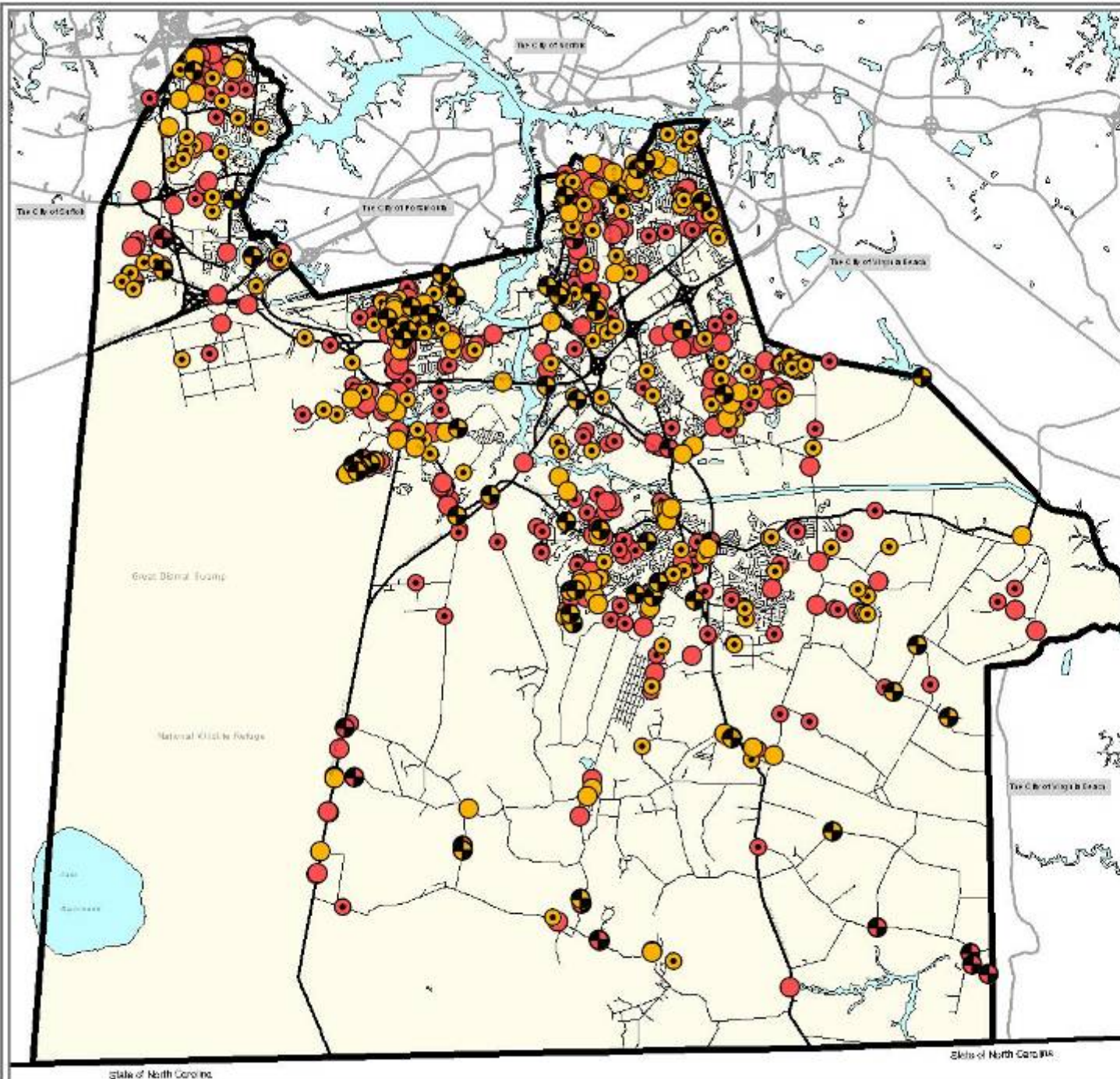
Public Works Calls for
Flooding Related Issues 

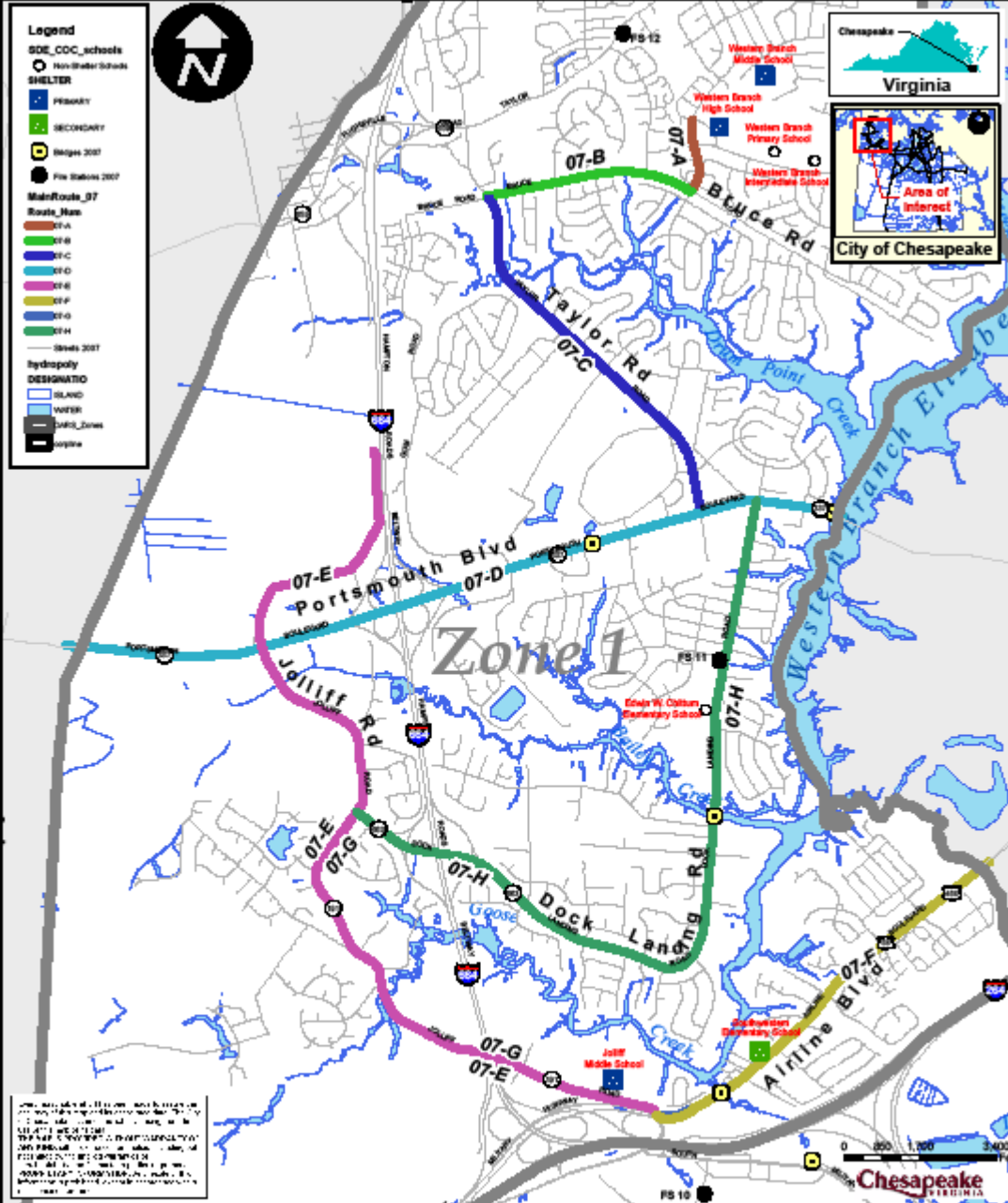
Public Works Calls for Flooding Related Issues

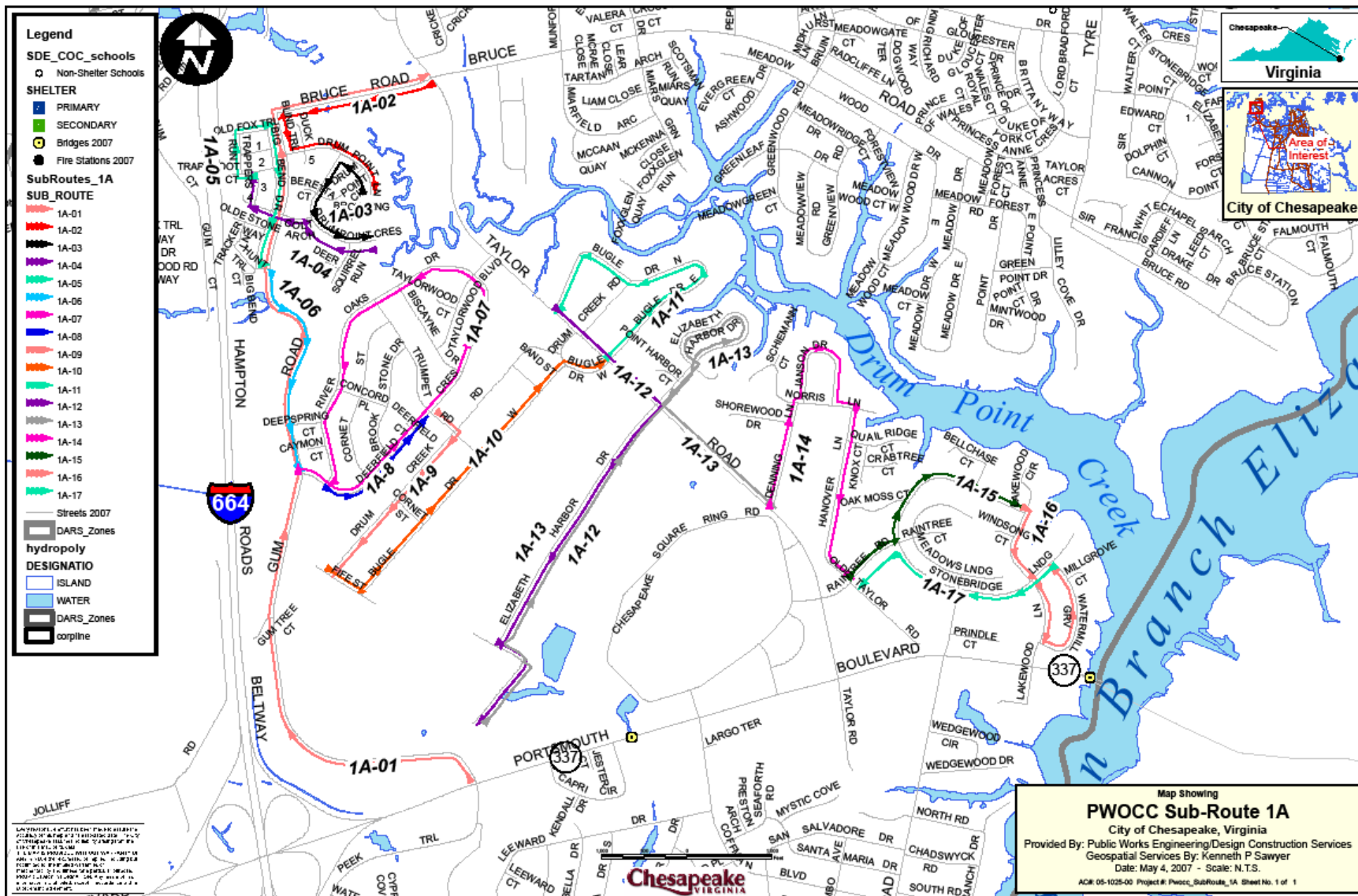
Adjoining Municipality Major Streets —————



February 1, 2000





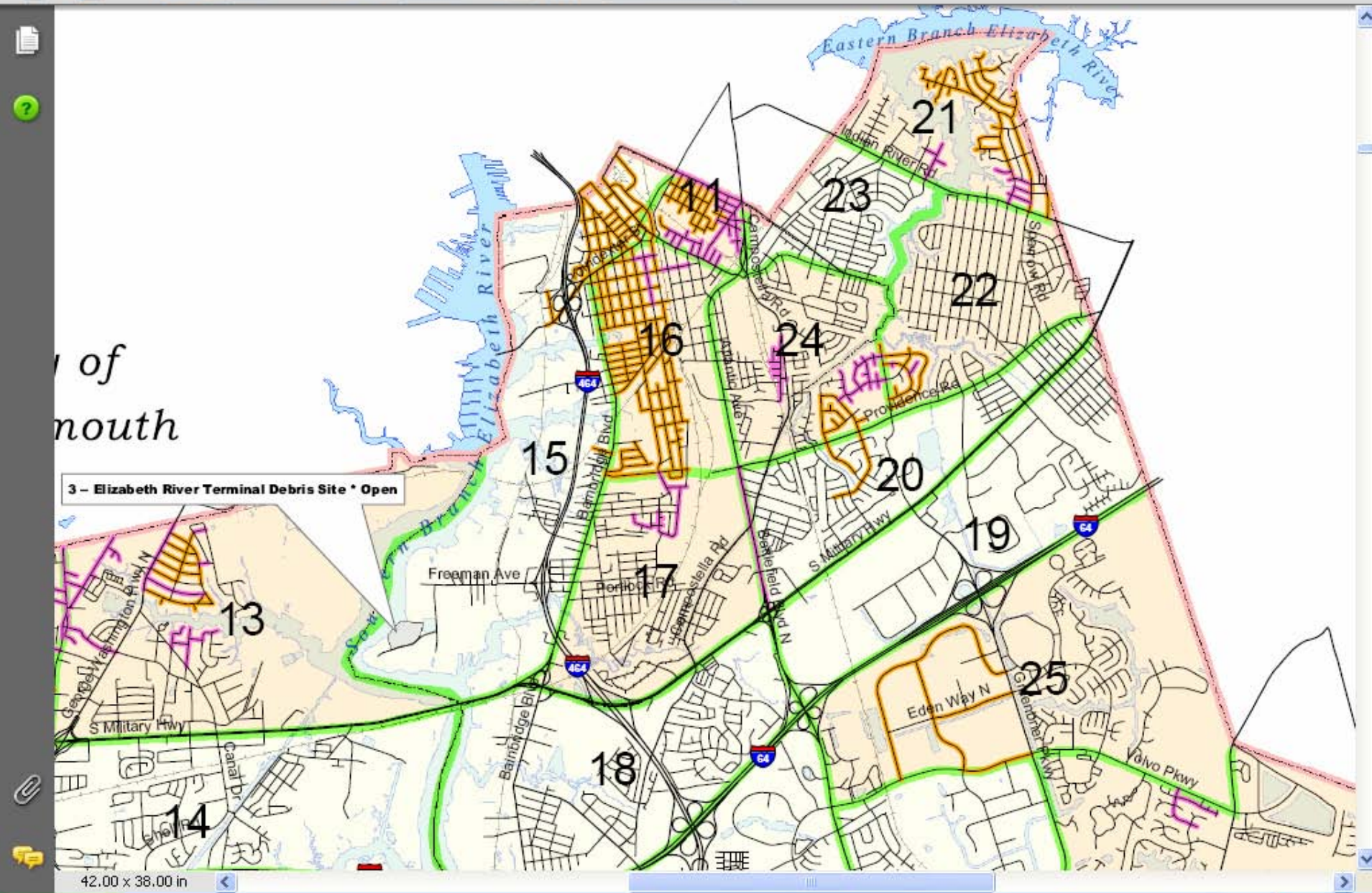


Post Event

- Debris Zones cleared (FEMA / citizen reporting)**

A number line from 0 to 8 with tick marks at every integer. The segment from 1 to 2 is shaded light blue, and the segment from 4 to 6 is shaded light red.





Debris Cleanup Status September 30, 2003

Status of Contractor Zones

- Yet to Begin
- Being Worked On
- Complete

Division of Contractor Zones

- North, Southeast, & Southwest Contracts

Streets Cleared of Debris

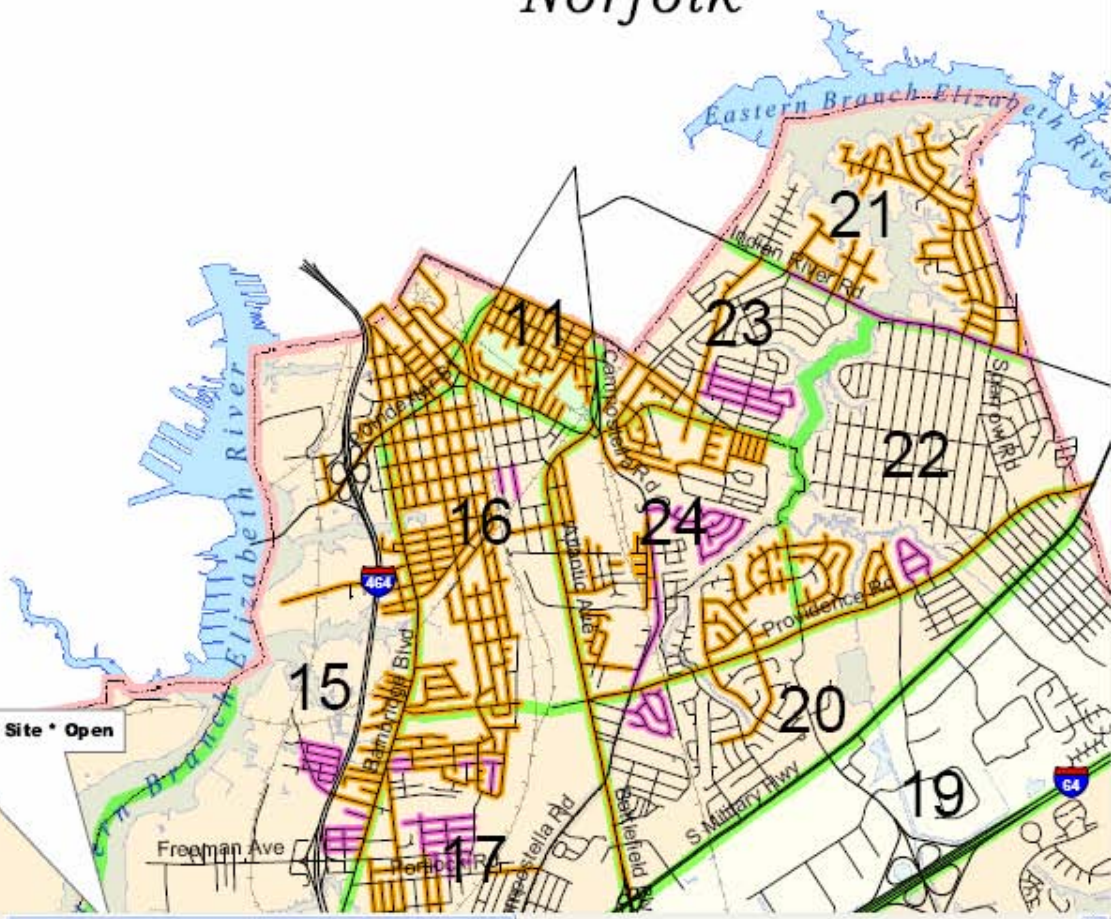
- Cleared to date
- Cleared on 9/30/03

Contractor Zones Cleared of Debris As of Sept 30, 2003

- Zone 1
- Zone 11

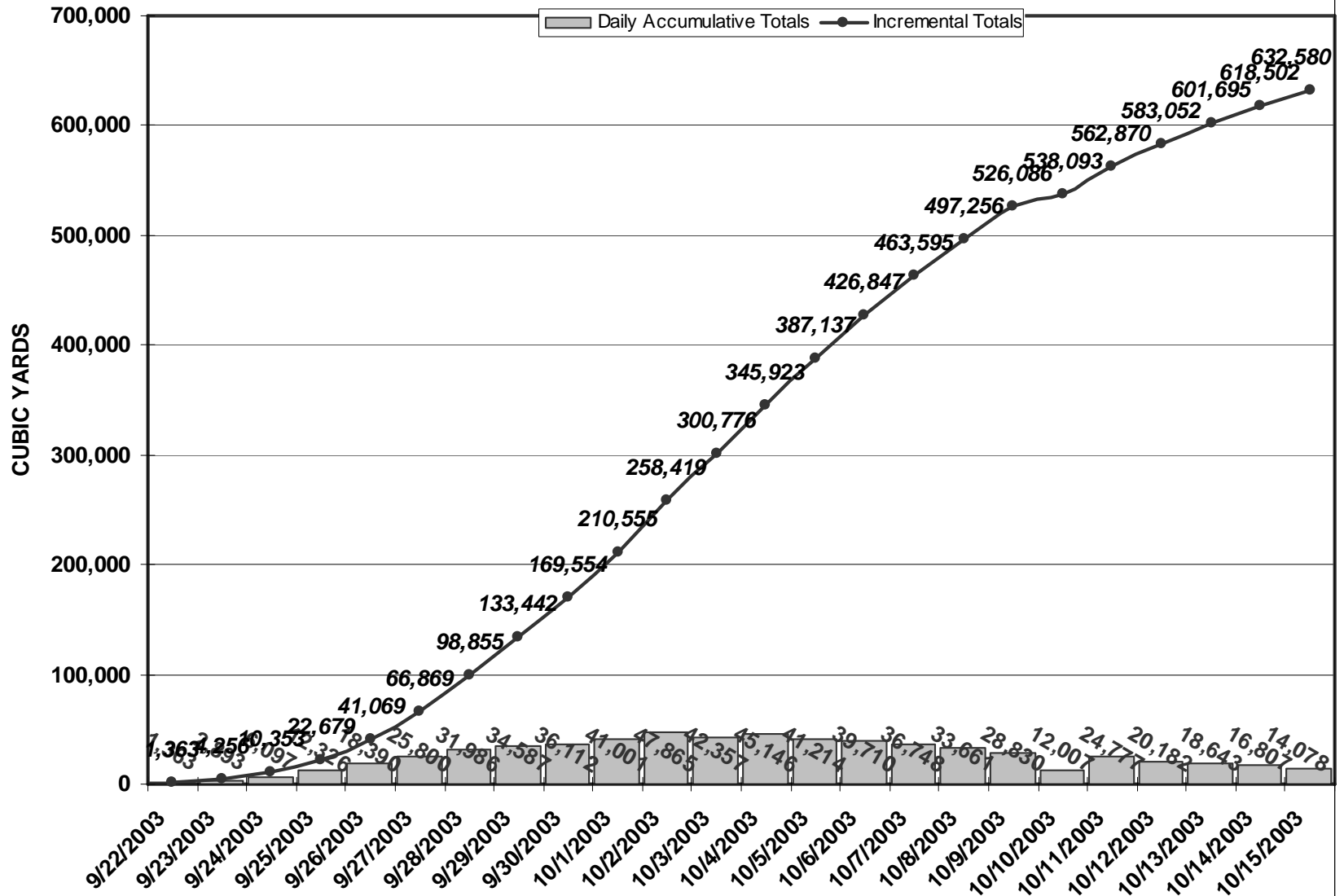
City of
Norfolk

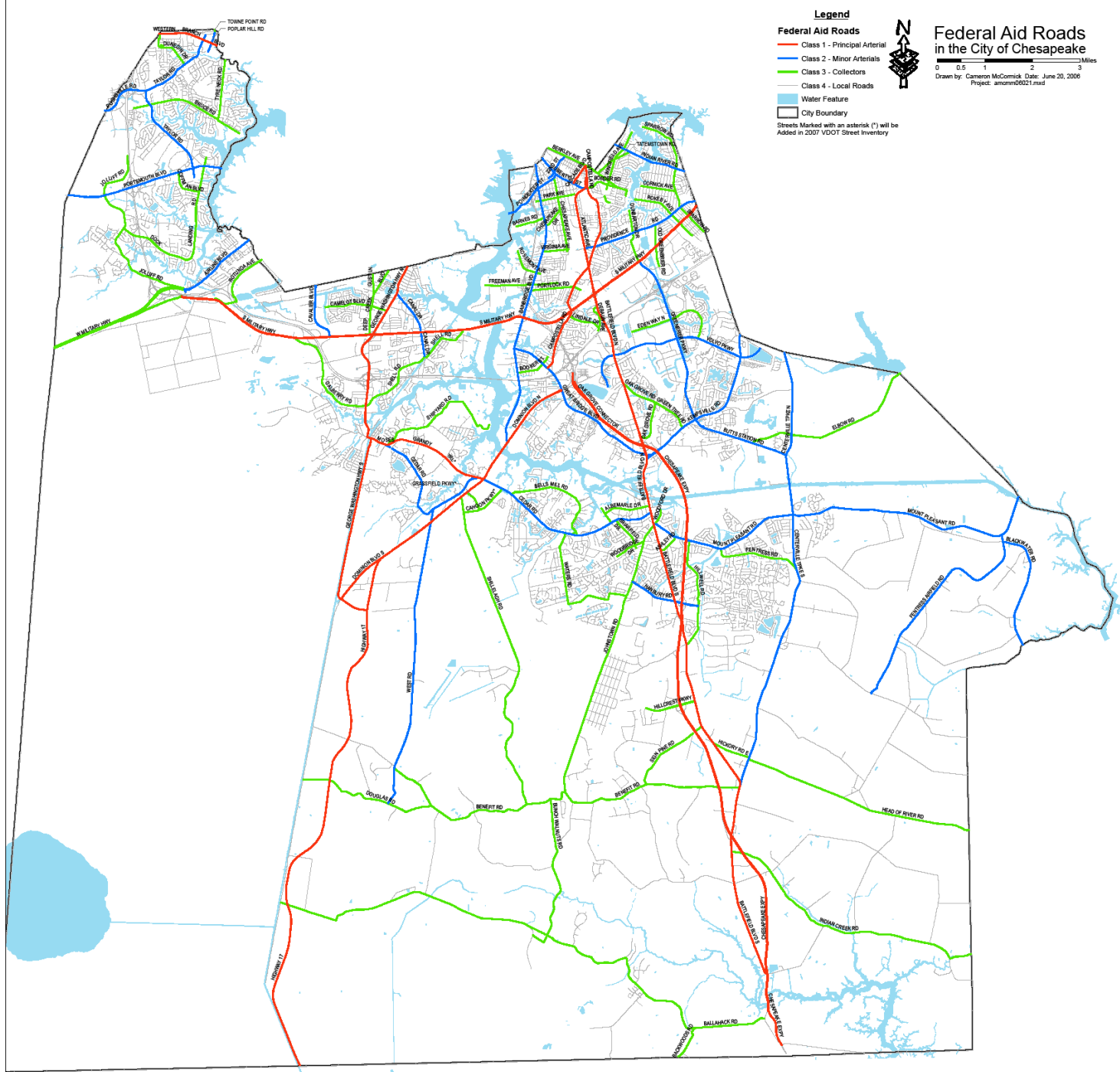
City of
Portsmouth

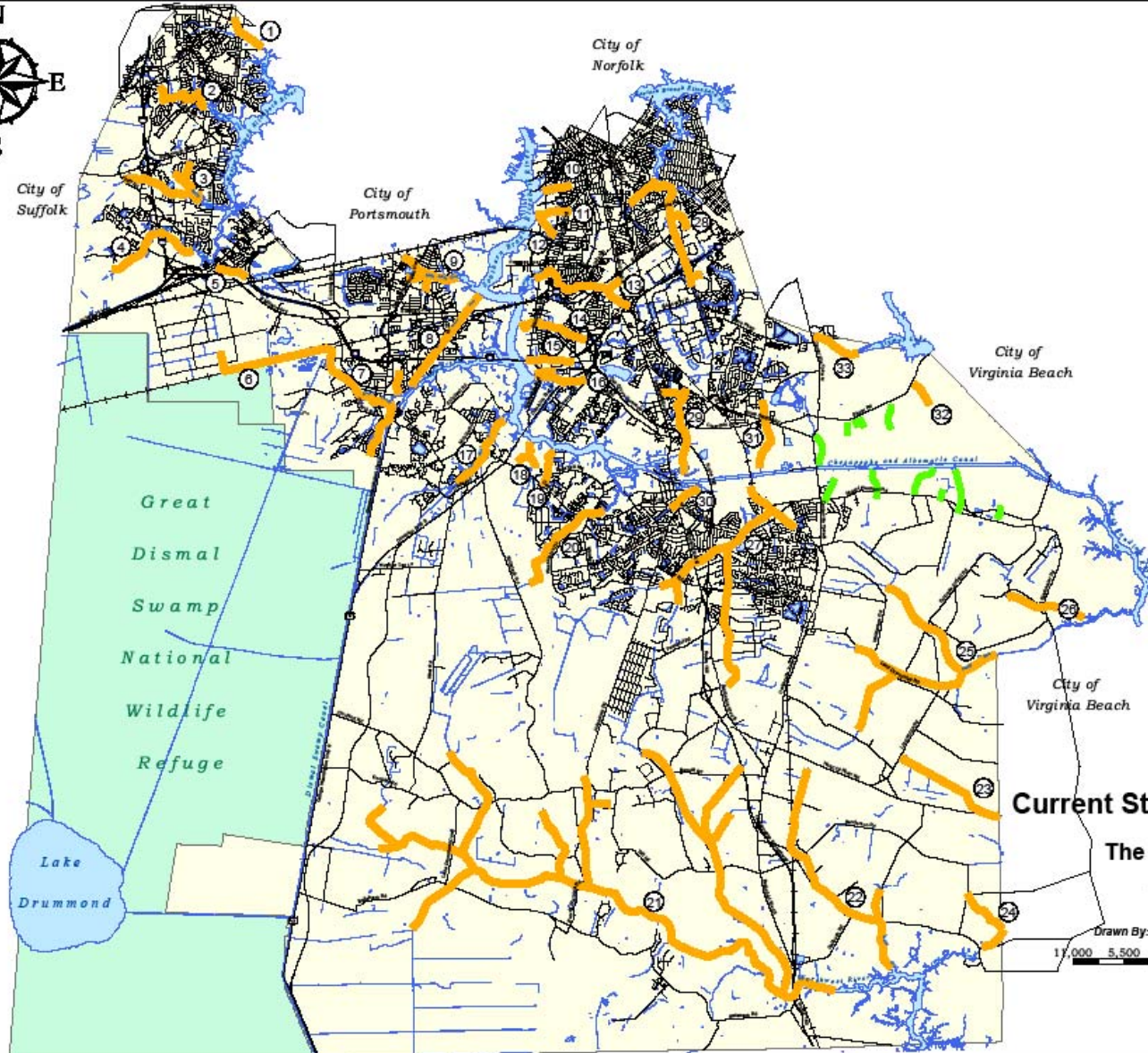
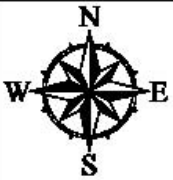




DAILY DEBRIS SITE COLLECTION







Legend

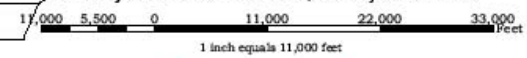
- Lead Ditches Flown
- Lead Ditches Not Flown
- Streets
- Railroads
- Water Bodies
- Island
- Dismal Swamp
- City Boundary

March 15, 2004

**Map Showing
Current Status of Lead Ditches Flyovers
for
The City of Chesapeake, Virginia**

Provided By
The Dept of Public Works Engineering
Geographic Information Services

Drawn By: Nathan Robbins Date: Mar 15, 2004 Project: amncr03074a



Questions?

Email: emartin@cityofchesapeake.net

Copy of this presentation, our technical manual on plotting road clearing and the FEMA Debris Manual are on the CDs available.